

What is claimed is:

1. A magnetic head comprising a perpendicular recording head, wherein:

the perpendicular recording head possesses a main pole, and a first yoke provided on the opposite side to a tip surface of the main pole that faces a perpendicular recording medium;

a principal plane having the widest area in the first yoke is in parallel to the tip surface; and

at least one or more sides of a side on the leading side of the main pole, a first side substantially parallel to the tracking direction, and a second side opposite to the first side, substantially parallel to the tracking direction are slanted against the vertical direction.

2. A magnetic head as claimed in claim 1, wherein the main pole is connected to the first yoke substantially on the center of the principal plane having the widest area in the yoke.

3. A magnetic head as claimed in claim 1, wherein a coil of at least one turn for exciting magnetic fluxes in the main pole is formed virtually about the main pole.

4. A magnetic head as claimed in claim 1, further comprising a reproduction head having a magneto-resistive element, wherein the reproduction head has a second yoke

formed, which introduces magnetic fluxes leaked from the perpendicular recording medium.

5 5. A magnetic head as claimed in claim 4, wherein the magneto-resistive element is formed in parallel to the tip surface of the main pole.

6. A magnetic head as claimed in claim 4, wherein:
the second yoke is composed of two separate magnetic substances; and

10 the magnetic substances are each provided on the trailing side and the leading side of the reproduction head.

7. A magnetic head as claimed in claim 4, wherein the first yoke is also served as the second yoke.

8. A magnetic head as claimed in claim 4, wherein at least more than one of a side on the leading side of the second yoke, a first side substantially parallel to the tracking direction, and a second side opposite to the first side, substantially parallel to the tracking direction are slanted against the vertical direction.

20 9. A magnetic head as claimed in claim 6, wherein:
in the magnetic substance located on the trailing side, at least one or more sides of a side on the trailing side, a first side substantially parallel to the tracking direction, and a second side opposite to the first side, substantially parallel to the tracking direction are
25 slanted against the vertical direction; and

in the magnetic substance located on the leading side,
at least one or more sides of a side on the leading side,
the first side substantially parallel to the tracking
direction, and the second side opposite to the first side,
5 substantially parallel to the tracking direction are
slanted against the vertical direction.

10. A magnetic head as claimed in claim 1, wherein an
angle θ formed by the tip surface of the main pole and the
side of the main pole located on the leading side is not
10 smaller than 25° and not larger than 65° .

11. A magnetic head as claimed in claim 1, wherein an
angle formed by a side perpendicular to the tip surface of
the main pole and a side of the main pole located in the
direction orthogonal to the rotating direction of the
15 recording medium is 20° or below.

12. A magnetic head as claimed in claim 1, wherein the
ratio $V2/V1$ of a volume $V1$ of the main pole against a volume
 $V2$ of the first yoke is 10 or over.

13. A magnetic disk drive comprising: at least a
20 magnetic perpendicular recording medium having a soft
magnetic backing layer and a recording layer on a substrate,
and a perpendicular recording head, the magnetic disk drive
wherein:

the perpendicular recording head possesses a main
25 pole, and a first yoke provided on the opposite side to a

tip surface of the main pole that faces a perpendicular recording medium;

a principal plane having the widest area in the first yoke is in parallel to the tip surface; and

5 at least one or more sides of a side on the leading side of the main pole, a first side substantially parallel to the tracking direction, and a second side opposite to the first side, substantially parallel to the tracking direction are slanted against the vertical direction.

10 14. A method of manufacturing a magnetic head having a perpendicular recording head, wherein the perpendicular recording head has a main pole, and a first yoke provided on the opposite side to a tip surface of the main pole that faces a perpendicular recording medium; a principal plane
15 having the widest area in the first yoke is in parallel to the tip surface; and at least one or more sides of a side on the leading side of the main pole, a first side substantially parallel to the tracking direction, and a second side opposite to the first side, substantially
20 parallel to the tracking direction are slanted against the vertical direction, the method comprising: an etching step that forms a taper shape from a side facing the medium toward a substrate at least on the leading side of the tip of the main pole, and a flattening step that forms the side facing

the medium substantially in parallel to a substrate surface,
whereby the main pole is formed.

15. A method of manufacturing a magnetic head as
claimed in Claim 14, further comprising a step of forming
5 an exciting coil that turns on a plane substantially
parallel to the substrate surface or the side facing the
medium, whereby the main pole is formed.